

Swanson-1, Geoffrey

From: Schwarz-1, Henry
Sent: Monday, April 21, 2003 6:45 AM
To: Schwarz-1, Henry
Subject: FW: FOIA E-mail

-----Original Message-----

From: CALDEIRO, FERNANDO (JSC-CB)
[mailto:fernando.caldeiro1@jsc.nasa.gov]
Sent: Monday, August 14, 2000 2:15 PM
To: 'Greenwell-1, Shawn'
Subject: RE: BFS Engage GPC Checklist Recovery Words

Shawn,

I agree with the root cause of the concern. The story of BFS engagement at the pad is well known and alive here. From day one of training this incident is brought up.

I do not know how the switch feels in the real thing. You need considerable pressure to actuate such switch in the simulators.

By the way, do not take my previous comments as an agreement to do anything in my part or the astronaut office since I have no saying in it. I just replied to Ed Sikora and all in order to throw in some clarification.

Thanks a lot

Frank C.

CB

(281) 244-8690

-----Original Message-----

From: Greenwell-1, Shawn [mailto:Shawn.Greenwell-1@kmail.ksc.nasa.gov]
Sent: Friday, August 11, 2000 10:10 AM
To: CALDEIRO, FERNANDO (JSC-CB)
Subject: RE: BFS Engage GPC Checklist Recovery Words

Frank, This discussion and the trouble shooting associated with it indeed has its roots from an accidental BFS engage push button activation during S0017. Shawn

-----Original Message-----

From: CALDEIRO, FERNANDO (JSC-CB)
[mailto:fernando.caldeiro1@jsc.nasa.gov]
Sent: Thursday, August 10, 2000 5:20 PM
To: 'Greenwell-1, Shawn'; 'Sikora, Edward A'
Cc: Sterritt, John M
Subject: RE: BFS Engage GPC Checklist Recovery Words

Ed,

In order to engage BFS after engine start and before T-0 you'll have to have a strong desire to mash the BFS button on the control stick.

All four other GPC's (PASS) going off line... the only scenario that I can think of right away is losing all of your electrical power, meaning having all three main buses go down, which of course will take your engine controllers and kill your engines. Now you have no com and no ability to do any procedures because your vehicle is electrically dead.

In terms of "PASS GPC FAIL" The only immediate crew steps are flight controls channel related and recovering an X'd screen. Post MECO you have a quick switch throw to halt such GPC, then you check with MCC regarding MPS

Prop switch throws (Prop dump, vac inert, etc) GPC recovery takes place when things settle a bit.

Take care

Frank C

-----Original Message-----

From: Greenwell-1, Shawn [mailto:Shawn.Greenwell-1@kmail.ksc.nasa.gov]
Sent: Thursday, August 10, 2000 2:50 PM
To: 'Sikora, Edward A'; Milon-1, Kathy; 'Greenwell-1, Shawn'
Cc: Livermore, Steve F.; Sterritt, John M; Mohler, David A; CALDEIRO, FERNANDO (JSC-CB); LANE, WILLIAM F. (JSC-DF); Herst, Terri
Subject: RE: BFS Engage GPC Checklist Recovery Words

Ed, I talked with Terri and the possibility of com loss with the vehicle is managed by the amount of redundancy already built into the KSC system(s). OIS-D has several layers of redundancy by itself. If on a bad day OIS did go down then the NTD's can switch the firing room personnel to either ICOM loop. If it was a really bad day we could also communicate via UHF from the front row.

So if we accept the built in communication redundancy then the issue is back to KSC leading the trouble shooting efforts to recover the GPC. Terri Murphy also mentioned that the crew does not practice GPC recovery steps very often as other failures are more probable during ascent. Is this making anyone more comfortable? Shawn

> -----Original Message-----

> From: Sikora, Edward A [mailto:Edward.Sikora-1@kmail.ksc.nasa.gov]

>

> Sent: Wednesday, August 09, 2000 12:58 PM

> To: Milon-1, Kathy; 'Greenwell-1, Shawn'

> Cc: Livermore, Steve F.; Sikora, Edward A; Sterritt, John M; Mohler,

> David A; CALDEIRO, FERNANDO; LANE, WILLIAM F

> Subject: RE: BFS Engage GPC Checklist Recovery Words

>

> Hi Terry/All:

>

> I remember it being reported at several of the BFS runs in the PCC that
> the page of steps for CDR to initiate GPC/LDB recovery was being added to
> the checklist's. It would seem that the astronauts would want the
> procedures for shutting down the SSME's and GPC/LDB recovery on their
> kneeboards. If they take all their queues from KSC via comm what is
> performed for a total loss of comm. If nothing but a mode 1 egress is
> performed, the SSME's would continue running (that queue is via comm from
> NTD to PLT) and after shutdown (remember in a BFS abort we have no LO2
> bleed) we only have 9 minutes to initiate drain (after GPC/LDB recovery
> via LPS or PLT initiated drain both called out from NTD to CDR/PLT) until
> we have no margin to Geyser. An LO2 Geyser occurrence in the LO2 Feedline
> can would be catastrophic for both the vehicle and crew.

>

> In short, after a BFS engaged abort (a very small probability) with a loss
> of comm (again a very small probability) the astronauts are sitting an a
> very large bomb with an approximate 9 minute fuse timer. We have
> procedures that are manually called out (from 3.5 miles away) to tell them
> how to diffuse that bomb. Do they really not want to also have those
> instructions (it's only 2 OMI pages worth) on their checklists to cover a
> loss of comm?

>

> My answer would be a resounding...Bu all we can do is suggest.

> -Ed Sikora

> MPS/SSME Engineering

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> From: Greenwell-1,
> Shawn[SMTP:Shawn.Greenwell-1@kmail.ksc.nasa.gov]
> Sent: Wednesday, August 09, 2000 10:11 AM
> To: Milon-1, Kathy
> Cc: Livermore, Steve F.; Sikora, Edward A; Sterritt, John M;
> Mohler, David A
> Subject: FW: BFS Engage GPC Checklist Recovery Words
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> Forwarding this for your information and concurrence. This subject
> came up during the BFS engage recovery procedure discussions. Since the
> Vol 5 procedural rewrite has resulted in a marked improvement in our
> recovery timelines the conclusion that KSC will lead GPC recovery efforts
> fits with the current Ascent Pocket Checklist and the trouble shooting
> philosophy. Please let me know if this conclusion needs to be revisited.
> Thanks, Shawn 1-3810.
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> -----Original Message-----
> From: Greenwell-1, Shawn
> Sent: Wednesday, August 09, 2000 9:47 AM
> To: Herst, Terri
> Subject: BFS Engage GPC Checklist Recovery Words
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> Terri,
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> I talked with the JSC Ascent Pocket Checklist DPS representative,
> Terri Murphy, yesterday. There are no words in the checklist that the
> crew would work while still on the Pad to attempt to recover the GPC after
> BFS engage. The BFS GPC fail words in the book are only used after T-0
> and provide a work around to overcome the loss of the BFS GPC. Although
> the subject of adding pre T-0 recovery words in the checklist have indeed
> been discussed in the past there is no plan to include these words in the
> checklist at this time. She concurred with the philosophy that KSC leads
> the crew through the GPC recovery procedure prior to T-0. Do we need to
> communicate this message to anyone else? I remember several people having
> a question about this during one of our BFS engage meetings. Shawn
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